

# MEETING SUMMARY

Job **Summary of June 1, 2016 Meeting with EPA**  
**Discussion of Data Evaluation Approach for Human Health Risk Assessment for**  
**Operable Unit 3 – Process Areas, Yerington Mine Site, NV**

Client **Atlantic Richfield Company (ARC)**

Date **June 2, 2016**

To **Jack Oman**

From **Alma Feldpausch, Julie Weicheld**

Date June 2, 2016

## 1. Meeting Introduction

Purpose: Teleconference to discuss data evaluation approach supporting HHRA work plan development.

### Read-aheads:

- Technical Memorandum 2 – Data Evaluation Approach for HHRA for OU-3, dated February 16, 2016
- Figure showing sample locations and subarea boundaries
- Figure showing VLT thicknesses across OU-3
- Excel file containing summary statistics for soil 0-2 ft bgs, 0-15 ft bgs, and VLT data collected from oxide tailings

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### Meeting Attendees

Chris Dirscherl	USEPA
Jeryl Gardner	NDEP
Mike Bedan	CH2MHill
Ken Greene	CH2MHill
Jack Oman	Atlantic Richfield Company (ARC)
Alma Feldpausch	Ramboll Environ
Julie Weicheld	Ramboll Environ
Jamie Tull	Arcadis-US
Erin Osborn	Arcadis-US
Chuck Zimmerman	Brown & Caldwell(B&C)
Matt Arno	Foxfire Scientific

### Follow-up discussion on OU-3 CSM meeting notes:

Additional detail will be included in the HHRA work plan to address EPA comments/questions regarding activities and uses specifically prohibited (or not prohibited) under the anticipated environmental covenant / access agreement (EC/AA) and clarification that the EC/AA pertains only to privately-held land within OU-3 and not to BLM-owned

land. The clarification that the EE/CA will apply only to private land is a global comment pertaining to the entire HHRA work plan.

Discussion of EPA comments on Tech Memo 2 followed, where comments were grouped by theme as outlined below.

## 2. **Definition of Exposure Areas**

ARC team proposed defining each of the current subareas as individual exposure units, where health risks would be calculated for each subarea while also preparing risks assuming the entire OU is one complete exposure unit. In this way, constituent concentrations in subareas more heavily impacted by historical operations would not be 'diluted' as could occur if risks were evaluated only on an OU-wide basis. The intent is to avoid overlooking 'hot spot' subareas and to understand risks for future workers whose activities may be limited to a small portion of the OU. Individual subarea risks and OU-wide risks will provide a range of risks useful in risk management decision-making.

## 3. **Defining Exposure Media & Calculation of EPCs**

The presence of VLT of varying thickness throughout the OU was discussed, along with the need to incorporate existing VLT analytical data (collected from the oxide tailings) into the current soil dataset. The ARC team proposed discussion during the Tech Memo 3 teleconference of specifically how VLT data would be used to complete the soil dataset at soil boring locations where VLT is present. This approach would more accurately reflect exposure media contacted by future workers and would address EPA team concerns about small sample size for those areas where relatively fewer soil samples are available due to greater thickness of VLT.

The evaluation of VLT was discussed by the ARC team, including some background on its use as a preliminary cap following a 2010 removal action. EPA noted that VLT is found in multiple OUs, and while OU-3 risk results for contact with VLT may inform its use across the Site we cannot necessarily extrapolate risks estimated for OU-3 to other OU's without examining the applicability of underlying assumptions (i.e., land use, receptors). The EPA team was generally in agreement on consideration of the VLT in the HHRA but together with ARC deferred detailed discussion of its use to allow time for EPA to review historical documents on VLT and confer on an approach. If needed, EPA will reach out to the ARC team to have a follow-up conversation about the presence of VLT in OU-3 and use of VLT data in advance of the conversation anticipated around Technical Memorandum 3.

The ARC team clarified that ProUCL software would be used to calculate exposure point concentrations. With adoption of the subarea-based exposure units, the ARC team does not recommend use of spatially-weighted average concentrations (SWACs) as exposure point concentrations. There were no concerns raised about use of ProUCL to calculate exposure point concentrations.

#### 4. Identification of COPCs

EPA had identified concerns with several proposed actions to refine the list of constituents evaluated in the HHRA which were discussed and resolved:

- The ARC team acknowledged EPA's concern regarding the use of the background soils data to eliminate constituents from further consideration and agreed that calculation of risks based on background concentrations would be a reasonable approach for understanding the contributions of background levels to total risk.
- The ARC team also acknowledged EPA's concern that elimination of constituents that are rarely detected could result in underestimating risks if constituents represent isolated areas of contamination that could present a risk to workers. EPA acknowledged that it is not appropriate to ascribe a maximum detected soil concentration to an entire subarea if it represents only a small portion of the area. After some discussion, the ARC team proposed identifying in the work plan those constituents that are rarely detected (defined in Tech Memo 2 as <5% detection frequency when the minimum sample size is 20). The work plan would summarize a case-by-case evaluation of the rarely detected constituents and provide a rationale for elimination of any constituents for EPA's review and approval.
- EPA agreed that elimination of constituents that are never detected is acceptable, provided that detection limits are not elevated.
- The ARC and EPA teams discussed the use of EPA's regional screening levels (RSLs) to refine the list of constituents evaluated in the HHRA. EPA will have greater confidence in accepting use of industrial RSLs to refine the list of constituents if the EC/AA is signed before the HHRA is underway. Until then, EPA tentatively agrees to use of a risk-based screening to eliminate those constituents for which the maximum detected concentration does not exceed an industrial RSL. EPA and ARC teams acknowledged that use of industrial RSLs is appropriate for OU-3 assuming the EE/CA is adopted, but their use at other OU's is dependent upon confirming the protectiveness of the industrial RSLs given OU-specific land use assumptions, relevant receptor populations, and existence of an EE/CA.
- At EPA's request, ARC will use residential RSLs to screen constituents evaluated in sediment.
- The ARC team will present the COPC identification process, revised as discussed during the teleconference, in the HHRA work plan and will also include the results of the process to allow EPA the opportunity to review and confirm the approach prior to completion of the HHRA report.

#### 5. Action Items & Next Steps

- Chuck Zimmerman (B&C) to send background information on VLT to the EPA team
- ARC to provide Technical Memorandum 3 in mid-July to support discussion of:
  - Exposure parameters for each receptor population identified in the CSM
  - Use of VLT data with soil data to calculate exposure point concentrations
  - Approach for considering vapor intrusion (indoor air) and vapors in a trench
- EPA may follow-up with ARC regarding the evaluation or use of VLT data.